

1. Determining V5 link configuration – Automatic Protocol Scan on the aurora^{Duet}

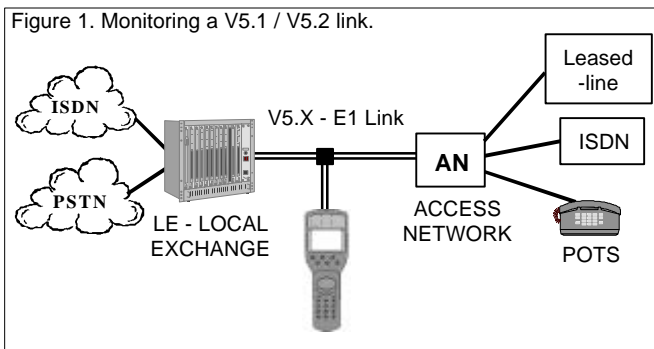
The most common problems facing the maintenance technician when confronting a V5 link in the field relate to the system configuration.

Questions that arise are:-

- Is it a V5.1 or a V5.2 link?
- Where are the C-channels?
- What type of traffic is on the link?

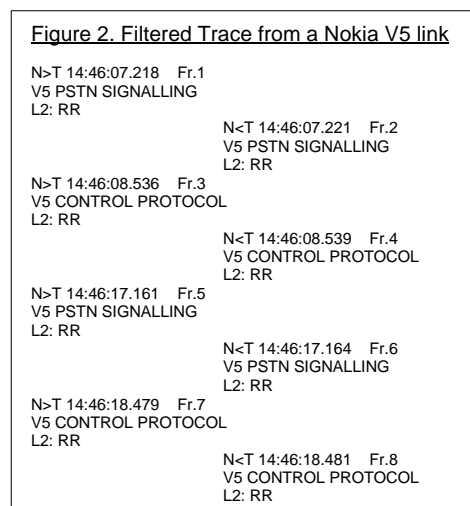
To provide the answer to these questions, the aurora^{Duet} provides an automatic link protocol scan to identify C-channel protocols and LAPD signalling. V5.1 links commonly use channel 16 as the C-channel where two V5 protocols only are in use. On V5.2 links, the C-channels are typically found on channels 15, 16 and 31. Five V5 protocols may be in use spread across these C-channels.

The aurora^{Duet} will scan any nominated timeslots on the link and identify the protocols and their locations along with any V5 encapsulated LAPD (ISDN or X.25) signalling. A V5.1 link will contain only V5 PSTN and CONTROL protocols; presence of any other V5 protocols indicates that the link is a V5.2 link.



2. Identifying Link Protocol timing issues – V5 decode and filtering on aurora^{Duet}

Synchronisation of the Access Network (AN) and Local Exchange (LE) equipment on a V5 link is essential for efficient link usage. This is particularly relevant when referring to V5.2 systems where a up to sixteen E1 links may be in use with C-channels controlling traffic across as many as 490 traffic channels.



The aurora^{Duet} filters allow specific V5 protocols to be selected with frame timestamps. Along with the user defined display settings the non-essential trace detail can be removed to see sequences of messages and acknowledgements and any timing issues between the AN and the LE.

Figure 2 shows an aurora^{Duet} trace from a normally operating link. The detail has been removed showing just the timestamps, the sequence, the V5 protocol identifier and the layer 2 message type. Directions 'N' represents Network (LE) and 'T' represents Terminal (AN). The messages are paired (sent message followed by received ACK); any timing issue will show an occasional loss of sequence. Physical link quality may also be assessed by the L1 statistics provided on the aurora^{Duet}.

The functionality detailed above is available in the latest release of aurora^{Duet} software. Please contact your Local Vendor or the Trend Communications Ltd Customer Support Hotline (tel: +44 1628 851085) for further information.

You may also visit our WEB SITE at: <http://www.trendcomms.com>